

**NUCLEAR CRITICALITY SAFETY PROGRAM (NCSP)  
TECHNICAL PROGRAM REVIEW**

**MARCH 15-16, 2016  
SANDIA NATIONAL LABORATORY**

**FINAL AGENDA  
Building 6585 (Rooms 110, 111 and 112)**

| <b>Tuesday, March 15, 2016</b>   |   |                | <b>TIME</b> |
|--|---|----------------|-------------|
|  | Welcome from SNL  | Gary Harms     | 10          |
|  | Safety and Security Briefing  | Gary Harms     | 10          |
|  | Welcome and Introductions   | Jerry McKamy   | 10          |
|  | A Year of Highs and Lows for the CSSG   | David Erickson | 10          |
|  | CSSG Review of the<br>Hands-on Training and Education Courses   | Calvin Hopper  | 15          |
| <br><b>NCSP<br/>TECHNICAL PROGRAM ELEMENTS TO BE PRESENTED</b>   |   |                |             |
| <b>ANALYTICAL METHODS<br/>INFORMATION PRESERVATION AND DISSEMINATION<br/>INTEGRAL EXPERIMENTS<br/>NUCLEAR DATA<br/>TRAINING AND EDUCATION<br/>(UNIVERSITY TASKS)</b> |   |                |             |
| <b>ANALYTICAL METHODS</b>  |   |                |             |
| ORNL   | SCALE 6.2 and AMPX Development and Modernization for the NCSP   | Brad Rearden   | 20          |
| ORNL   | Diagnosing Undersampling in Monte Carlo Eigenvalue and Flux Tally Estimates                           | Chris Perfetti | 20          |
| IRSN   | Update of the Nuclear Criticality Slide Rule for Emergency Response to a Nuclear Criticality Accident | Matthieu Duluc | 15          |
|  |   |                | 110         |
| <b>BREAK</b>   |   |                |             |
| <b>ANALYTICAL METHODS<br/>(continued)</b>  |   |                |             |
| ORNL   | Recent Progress in Determination of Critical Experiment Correlations                                  | B.J. Marshall  | 20          |
| LANL   | MCNP Progress for NCSP  | Forrest Brown  | 25          |
| LANL   | Fission Multiplicity Model Usage in Criticality Calculations  | Michael Rising | 15          |
| LANL   | The Dawn of NJOY21 in 2015  | Jeremy Conlin  | 15          |
| OPEN DISCUSSION  |   | ALL            | 10          |
| <b>INFORMATION PRESERVATION AND DISSEMINATION</b>  |   |                |             |
| LLNL   | ICSBEP Accomplishments  | Dave Heinrichs | 15          |
|  |   |                | 100         |
| <b>LUNCH</b>   |   |                |             |

**NUCLEAR CRITICALITY SAFETY PROGRAM (NCSP)  
TECHNICAL PROGRAM REVIEW**

**MARCH 15-16, 2016  
SANDIA NATIONAL LABORATORY**

**Tuesday, March 15, 2016**

**INFORMATION PRESERVATION AND DISSEMINATION  
(continued)**

|                             |   |               |    |
|-----------------------------|---|---------------|----|
| LLNL                        | Website Statistics  | Chuck Lee     | 15 |
| NNSA/ORNL                   | Website Enhancements                                      | Lori Scott    | 10 |
| OPEN DISCUSSION             |   | ALL           | 10 |
| <b>INTEGRAL EXPERIMENTS</b> |   |               |    |
| LANL                        | Operational Considerations for Experimental Work at NCERC | Tim Beller    | 15 |
| LANL                        | NCERC Control Room Upgrades                               | Ryan LeConte  | 15 |
| LANL                        | NCERC Safety Basis Update                                 | James Strelow | 15 |
| NNS                         | KRUSTY Safety Basis Update                                | Jeff Lewis    | 15 |
|                             |   |               | 95 |

**BREAK**

**INTEGRAL EXPERIMENTS  
(continued)**

|      |   |                              |    |
|------|---|------------------------------|----|
| LANL | Subcritical Benchmark of the BeRP Ball Reflected by Tungsten  | Jesson Hutchinson            | 20 |
| LANL | Uncertainty as a Function of Time for Subcritical Experiment Parameters   | Jesson Hutchinson            | 15 |
| LANL | Material Considerations for Burst Reactor Designs   | Bob Margevicius              | 15 |
| LANL | Final Critical Experiment Design to Measure the Fission Neutron Spectrum Shape Using Threshold Activation Detectors | Theresa Cutler               | 15 |
| LANL | Dynamics and Stability Analysis for the Kilowatt Reactor Using Stirling TechnologY (KRUSTY) Experiment              | Steve Klein                  | 15 |
| LANL | Utilization of NCERC in Support of Nuclear Forensics Measurements   | Todd Bredeweg<br>John Bounds | 15 |
|      |   |                              | 95 |

**ADJOURN**

**NUCLEAR CRITICALITY SAFETY PROGRAM (NCSP)  
TECHNICAL PROGRAM REVIEW**

**MARCH 15-16, 2016  
SANDIA NATIONAL LABORATORY**

**Wednesday, March 16, 2016**

| <b>INTEGRAL EXPERIMENTS<br/>(continued)</b> |  |                   |     |
|---|--|-------------------|-----|
| ORNL  | The Collaborative International Benchmark Evaluation for the SILENE Solution Critical Experiment                       | Thomas Miller     | 20  |
| LANL  | Evaluation of Engineering Controls Implemented to Mitigate Godiva Contamination  | Joetta Goda       | 20  |
| LANL  | Use of Comet to Support Development of the Design Basis for JAEA's Transmutation Physics Experimental Facility (TEF-P) | Joetta Goda       | 15  |
| LANL  | Preliminary Flattop-25 Reevaluation Results  | Jeff Favorite     | 15  |
| LLNL  | TEX Subcritical Thermal and Dose Measurements  | Catherine Percher | 15  |
| LLNL  | TEX-Hf Preliminary Design  | Catherine Percher | 15  |
|   |  |                   | 100 |

**BREAK**

| <b>INTEGRAL EXPERIMENTS<br/>(continued)</b> |                                       |            |    |
|---|---------------------------------------|------------|----|
| SNL   | NCSP IE and T&EP Activities at Sandia | Gary Harms | 25 |
| OPEN DISCUSSION                             |                                       | ALL        | 10 |

**NUCLEAR DATA**

|      |   |                |     |
|------|---|----------------|-----|
| ORNL | Improvements for the <sup>63</sup> Cu and <sup>65</sup> Cu Resonance Evaluations for Criticality Safety Applications  | Vladimir Sobes | 15  |
| ORNL | Cross Section Evaluation of <sup>40</sup> Ca for Neutron Energies up to 1.5 MeV and Validation of Tungsten Cross Sections up to 100 keV                                       | Marco Pigni    | 15  |
| ORNL | Resonance Region Cross-Section Measurements for Calcium and Cerium  | Klaus Guber    | 15  |
| IRSN | IRSN-ORNL Data Evaluation in Support of Criticality Safety:<br><sup>235</sup> U, <sup>239</sup> Pu, <sup>56</sup> Fe, <sup>16</sup> O, <sup>54</sup> Fe and <sup>103</sup> Rh | Luis Leal      | 15  |
| LANL | NDAG and Nuclear Data Working Group Update  | Skip Kahler    | 15  |
| LANL | Data Testing CIELO Evaluations with ICSBEP Benchmarks   | Skip Kahler    | 15  |
| LANL | Evaluation of Prompt Fission Gamma Rays for n+U235, n+Pu239, and Cf252(sf)  | Patrick Talou  | 15  |
|      |   |                | 105 |

**LUNCH**

**NUCLEAR CRITICALITY SAFETY PROGRAM (NCSP)  
TECHNICAL PROGRAM REVIEW**

**MARCH 15-16, 2016  
SANDIA NATIONAL LABORATORY**

**Wednesday, March 16, 2016**

**NUCLEAR DATA  
(continued)**

|             |  |                              |    |
|-------------|--|------------------------------|----|
| RPI<br>KAPL | Overview of Recent Nuclear Data Measurements at RPI<br>Status of the LINAC Refurbishment | Yaron Danon/<br>Brian Epping | 25 |
|-------------|--|------------------------------|----|

|     |  |             |    |
|-----|--|-------------|----|
| BNL | ADVANCE Status, ENDF/B-VIII Status and Resonance Fun | David Brown | 20 |
|-----|--|-------------|----|

|                 |  |     |    |
|-----------------|--|-----|----|
| OPEN DISCUSSION |  | ALL | 10 |
|-----------------|--|-----|----|

**TRAINING AND EDUCATION**

|      |   |            |    |
|------|---|------------|----|
| ORNL | Status of the NCSP Training and Education Courses for<br>FY2015 | Doug Bowen | 15 |
|------|---|------------|----|

|      |   |                   |    |
|------|---|-------------------|----|
| LANL | Summary of CNEC and CVT Year One Measurement<br>Campaigns | Jesson Hutchinson | 15 |
|------|---|-------------------|----|

**NCSP UNIVERSITY TASKS**

|                      |  |                |    |
|----------------------|--|----------------|----|
| Georgia Tech<br>ORNL | Development of a New Unresolved Resonance Region<br>Analysis Methodology | Andrew Holcomb | 20 |
|----------------------|--|----------------|----|

|  |                                      |     |           |
|--|--------------------------------------|-----|-----------|
|  | <b>GENERAL DISCUSSION/CONCLUSION</b> | ALL | 10<br>115 |
|--|--------------------------------------|-----|-----------|

**BREAK**

|                                    |  |                  |    |
|------------------------------------|--|------------------|----|
| North Carolina State<br>University | <u>Movie</u> : Thermal Scattering Data Generation and Advance<br>Methods Development | By: Ayman Hawari | 20 |
|------------------------------------|--|------------------|----|

20

**ADJOURN**

**NDAG MEETING** *for invitees only*